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- Published:**  
— *with international search report*
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: **USE OF VEGETABLE OIL AS AN ADJUVANT FOR SUBSTANCES HAVING A FUNGICIDE, BACTERICIDE, INSECTICIDE AND HERBICIDE ACTIVITY**

(57) Abstract: The present invention relates to use of vegetable oils such as soybean oil as an adjuvant for substances having a fungicide, bactericide and insecticide activity in preventive or curative treatments of plant diseases caused by fungi, bacteria and insects on agricultural cultivations. In addition, the present invention relates to use of vegetable oils such as soybean oil as an adjuvant for substances having a herbicide activity in treatments for weed control on agricultural cultivations. Finally, the present invention relates to a fungicide, bactericide, insecticide or herbicide composition characterized in that it comprises: a stable water emulsion of vegetable oils such as soybean oil; and at least one substance having a fungicide, bactericide, insecticide or herbicide activity.

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A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 A01N25/02

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, BIOSIS, CHEM ABS Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 15 42 682 A (WINKLER HERBERT HEINZ;BEHLEN DIPL LANDW DR WILHELM) 2 July 1970 (1970-07-02)  the whole document  ---	1,3-6, 10,11, 13-16, 18,22
X	DATABASE WPI Section Ch, Week 198442 Derwent Publications Ltd., London, GB; Class C03, AN 1984-259496 XP002222294 & JP 59 157008 A (SUMITOMO CHEM CO LTD), 6 September 1984 (1984-09-06) abstract  ---  -/--	1,6,10

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the International filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the International filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&amp;" document member of the same patent family

Date of the actual completion of the International search

25 November 2002

Date of mailing of the International search report

Name and mailing address of the ISA

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 99 03342 A (CHEMTEC LEUNA GES FUER CHEMIE ;BECKER KARL (DE); KLIMEK IRENE (DE)) 28 January 1999 (1999-01-28)  page 3, line 1 - line 19; claims; examples 1-5  ---	1,3,6, 10,11, 13,16, 18,22
X	GRAYSON, B. TERENCE ET AL: "Effect of adjuvants on the therapeutic activity of dimethomorph in controlling vine downy mildew. I. Survey of adjuvant types" PESTICIDE SCIENCE (1996), 46(3), 199-206, XP000591650 the whole document  ---	1,3-6, 10,11, 13-16, 18,22
A	BANKS V E ET AL: "INFLUENCE OF SOYBEAN OIL CARRIER AND METHOD OF APPLICATION ON WEED CONTROL IN SOYBEANS GLYCINE-MAX" WEED SCIENCE, vol. 36, no. 4, 1988, pages 504-509, XP009000920 ISSN: 0043-1745 the whole document  -----	1

**Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)**

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)**

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:  
1, 3-5(all partially), 6(complete), 10, 11, 13-16 (all partially),  
18(complete), 22(partially)

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1, 3-5 (all partially), 6(complete), 10, 11,  
13-16 (all partially), 18(complete), 22(partially)

Use of a vegetable oil as an adjuvant for fungicidal substances; corresponding compositions and uses thereof.

2. Claims: 1, 3-5 (all partially), 7(complete), 10, 11,  
13-16 (all partially), 19(complete),  
22(partially).

Use of a vegetable oil as an adjuvant for bactericidal substances; corresponding compositions and uses thereof.

3. Claims: 1, 1-5(all partially), 8(complete), 10, 11,  
13-16(all partially), 20(complete), 22(partially).

Use of a vegetable oil as an adjuvant for insecticidal substances; corresponding compositions and uses thereof.

4. Claims: 2(complete), 3-5(all partially), 9(complete),  
10(partially), 12(complete), 13-15(all partially),  
17(complete), 21 (complete), 22(partially).

Use of a vegetable oil as an adjuvant for herbicidal substances; corresponding compositions and uses thereof.

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
DE 1542682	A	02-07-1970	DE 1542682 A1	02-07-1970
JP 59157008	A	06-09-1984	NONE	
WO 9903342	A	28-01-1999	EP 0891707 A1	20-01-1999
			AT 213121 T	15-02-2002
			AU 9064798 A	10-02-1999
			DE 59706389 D1	21-03-2002
			WO 9903342 A1	28-01-1999
			ZA 9806433 A	17-05-1999